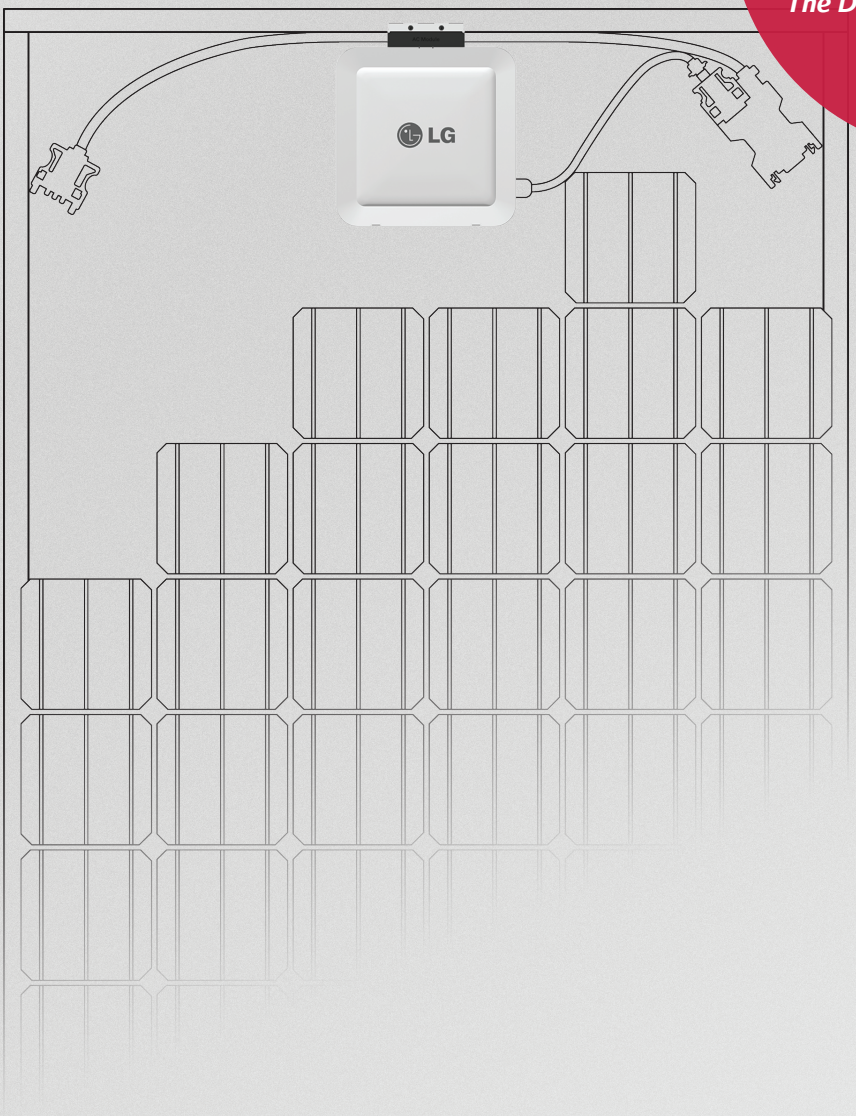
Perfect
AC™ Module

The Difference is in the Detail



MonoX® ACe

Troubleshooting Guide

LGxxxA1C-B3

LG
Life's Good

Product Specifications

AC module

DC Input				
Parameter	Section	Value		
Power	Max.	295 W	300W	305W
	Tolerance	3 %	3 %	3 %
Voltage	Open Circuit	39.7 V	39.8 V	40.0 V
	Max. Power Point	31.8 V	32.0 V	32.1 V
Current	Short Circuit	9.85 A	9.98 A	10.10 A
	Max. Power Point	9.28 A	9.40 A	9.52 A
Efficiency	Relative Reduction	< 2.0%		
	Note : *Relative efficiency reduction in respect to irradiance			

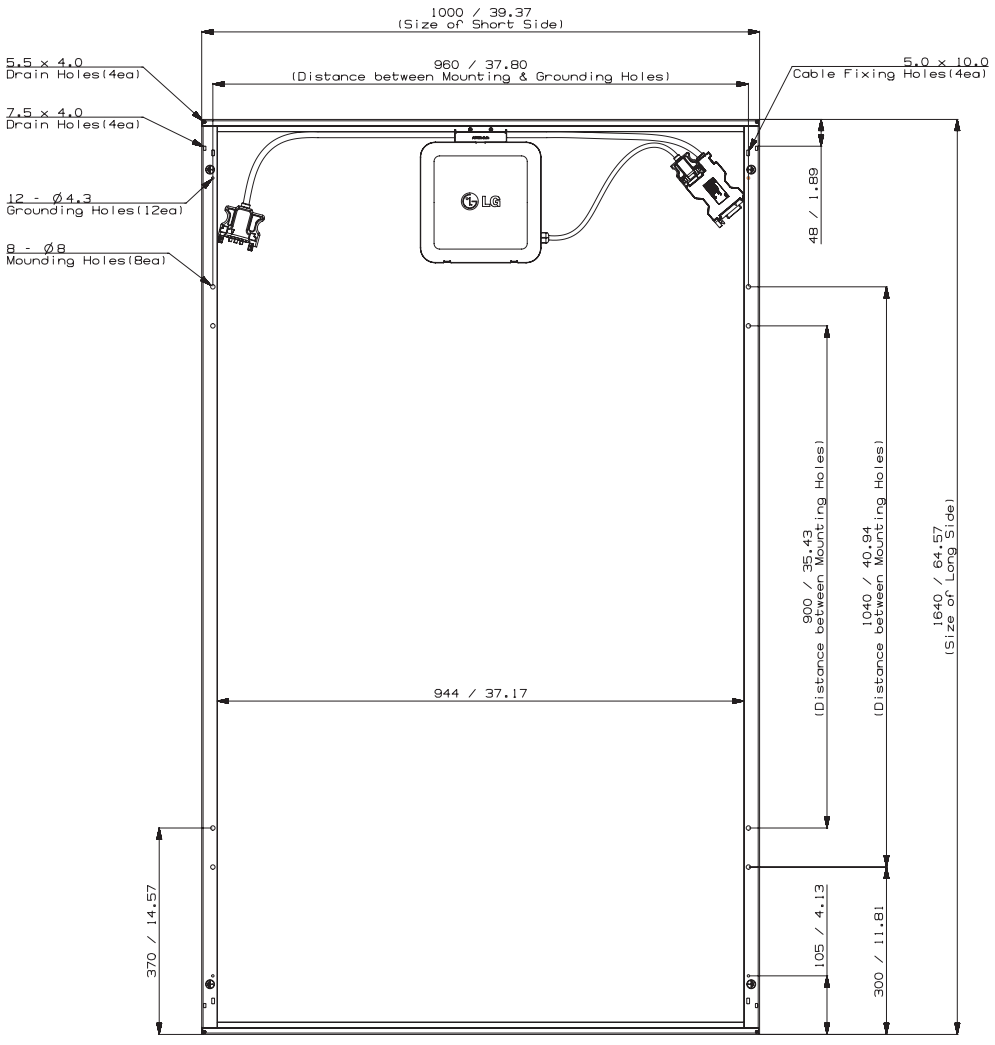
Note : Rated electrical characteristics are within 10 percent of above figures.
PV module was measured at STC (Standard Test Condition : Irradiation 1,000W/m2, Cell temp. 77°F(25°C), 1,5AM)

AC Output			
Parameter	Section	240VAC	208VAC
Power	AC Continuous[1)]	280W (@DC Module 295W) / 285W (@DC Module 300W) / 290W (@DC Module 305W)	
	Inverter Rated Continuous	305W	300W
Voltage	Rated	240V (211 ~ 264 V)	208V (187 ~ 229V)
Current	Rated	1.27A	1.44A
	Max. Fault Current	77A	
Efficiency	Nominal	60 Hz (59.3 ~ 60.5 Hz)	
	Extended	57.0 Hz ~ 60.5 Hz	
Power Factor		> 0.95	
CEC Weighted Efficiency (California Energy Commission)		96.5%	96.0%
Max. Number of AC Modules		12 ea	11ea
[1)] Pmax (AC) = Max. Input DC Power x CEC Efficiency			
Protection			
Ground Fault Detection and Interrupt (GFDI)		Applied	
Fuse		2A	
CAUTION : FOR CONTINUED PROTECTION AGAINST THE RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE			
Over Current Protection Device (OCPD)		20A	

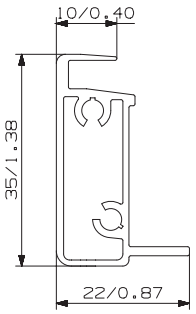
AC module

Mechanical Data	
Micro Inverter Model (Utility Interactive)	LM305UE-G1
Enclosure Rating	Type 6
Operating Ambient Temperature	- 40 ~ 65 °C (-40 ~ 145°F)
Operating Temperature (internal)	- 40 ~ 90 °C (-40 ~ 194°F)
Storage Temperature	- 40 ~ 90 °C (-40 ~ 194°F)
Weight	18.0 kg
Certification	
UL 1703, IEC 61215 Ed 2, IEC 61730 Safety Class II, CE, ISO9001 UL1741 / IEEE1547 CSA 22.2 No. 107.1-01 FCC Part 15 Class B	
Dimension	

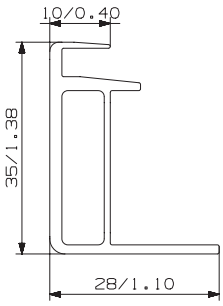
Unit: mm / in.



Cross-sectional Drawings



Short Side Frame



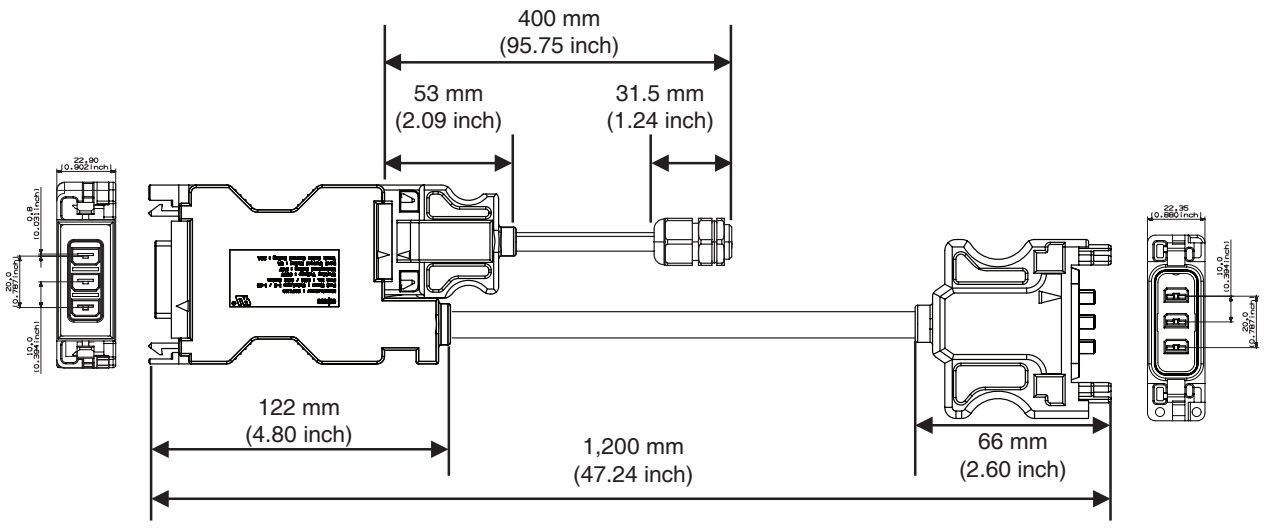
Long side frame

Response to Abnormal Conditions

IEEE 1547 (Default)		
Parameter	**Range**	**Clearing Time (s)**
Phase Voltage	V < 60V	<0.16
Voltage	60V ≤ V < 106V	< 2.00
	132 ≤ V < 144V	< 1.00
	V ≥ 144V	< 0.16 (< 0.016, Hawaii mode - TOV)[1)]
Frequency	> 60.5Hz	< 0.16
	< 59.3Hz (< 57 Hz, Hawaii mode)[1)]	< 0.16
Note 1 : This test is performed in nominal conditions, except for test parameter Note 2 : After clearing, if grid returns to the normal state, it takes up to 5 minutes for operation of AC module		

Dedicated Cables

Trunk		
Cable	Type	TC-ER sunlight resistant
	Max. Voltage	600V
	Max. Current	20A
	Size	12AWG
Connector	Max. Voltage	300V
	Max. Current	20A
Drop		
Cable	Type	TC-ER sunlight resistant
	Max. Voltage	600V
	Max. Current	5A
	Size	18AWG
Connector	Max. Voltage	300V
	Max. Current	5A
Certification		
UL9703, UL6703A		
Dimensions		



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1 Safety

Note and comply with the safety guidelines of this manual while handling AC modules. Failure to comply may result in severe damage to the equipment and/or fatal injuries.

1-1 Safety Symbols

Safety symbols are used to minimize loss and injury during handling and operation of the equipment specified in this manual.

⚠ DANGER	Failure to comply with the instructions may cause fatal injuries or immediate death.
⚠ WARNING	Failure to comply with the instructions may cause severe injuries or death.
⚠ CAUTION	Failure to comply with the instructions may cause injuries or damage to property.
	Failure to comply with the instructions may cause severe injuries or immediate death by overvoltage.
	Failure to comply with the instructions may cause injuries or damage to property by fire.

AC Module

⚠ DANGER

- To prevent the risk of electric shock, stay away from current-carrying terminals during operation. And, allow several minutes after the circuit breaker has been turned off. It may be energized in the open position.
- To prevent the risk of overvoltage, do not disconnect the cable connector during operation.

⚠ WARNING

- To prevent the risk of burns, do not touch metal parts during operation.
- For safety, only qualified persons should service modules.
- To prevent the risk of electric shock, stay away from damaged module(s). Do not use module(s) with broken glass or torn backsheets.
- Damaged modules must be handled with proper safety equipment. Failure to comply may result in serious bodily injury or death.
- For proper operation, make sure to use exclusively cables, connectors and accessories provided by LG Electronics. Parts that are not listed may cause critical danger.
- For proper operation, the AC Module shall be connected only to a dedicated branch circuit.
- To prevent the risk of fire, do not connect any device between the AC module and circuit breaker. Circuit breaker may not work properly.
- Before installation, make sure to check that the area of location meets the required environment specified in **Chapter 6. Product Specification** (Voltage, frequency, temperature, number of AC modules, overcurrent device).

⚠ CAUTION

- Use proper equipment, connectors, wires and buttresses for the installation of the module. Failure to comply may result in product damage, product failure and/or bodily injury.
- To reduce the risk of accidents, do not install during inclement weather.
- To prevent the risk of electric shock, do not touch the glass surface or frame of the solar module after installation.
- To prevent the risk of injury, do not apply pressure on the module (ex. placing heavy objects or stepping on the module).
- To prevent the risk of injury, do not drop the module; modules must be gently handled and placed down.
- For proper operation, do not scratch the coating surface of the frame. It may increase the corrosion of the frame.
- For proper operation, do not concentrate sunlight on the module surface.
- Addition of holes in the frame or glass of the module may decrease the strength and integrity of the frame or glass.
- Do not remove warning labels.
- Store the module in its original package until installation.

Gateway

⚠ WARNING

- EnerBox warranty void if cover removed. No serviceable parts inside. Refer servicing to qualified personnel.
- To avoid communication interference, do not connect the product to power strips, surge protectors, or surge protector-embedded power strips. It is recommended to directly connect the gateway to a120VAC outlet.

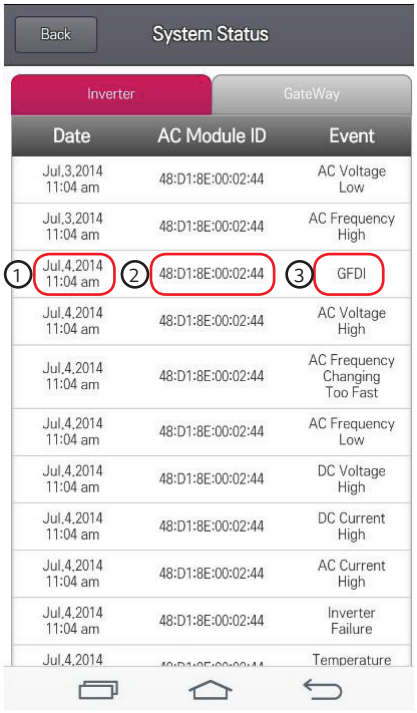
⚠ CAUTION

- Only certified installers should enter the installer mode.PV system may malfunction.
- Set the grid configuration to best suit the installation area. PV system may malfunction.

2 Messages and Alerts

The app shows real time status of the AC modules under AC Module Status and System Status, as well as Array View and Events through the monitoring web server. Please refer **AC module System Installation Instruction** and **AC Module Web Server Manual** for further details.

Ex) App Messages Screen

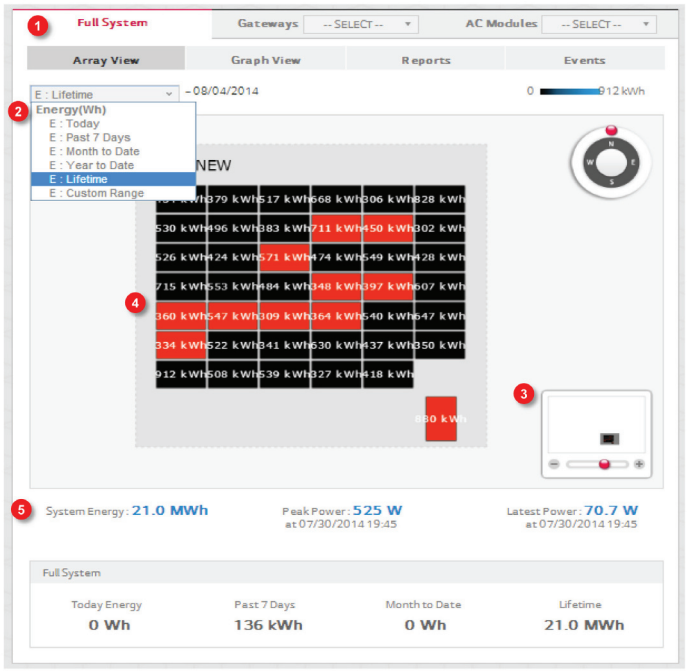


① **Date**

② **AC module ID**

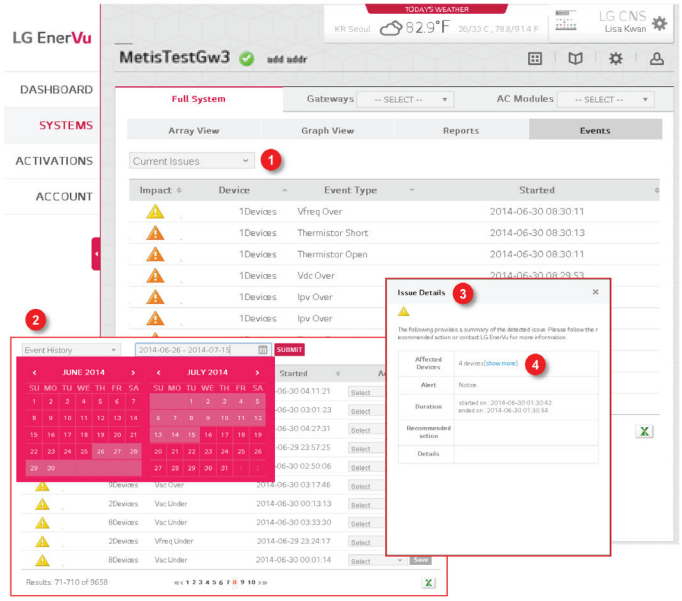
③ **Message type**

Ex) Web Array View Screen



① Select monitoring levels. (ex. Full System, by Gateway or individual AC Module)
② Set the monitoring period. (Today, Past 7 Days, Month, etc.)
③ Installer scan zoom in or out of the screen.
④ If the module is red, maintenance is required.
Click the red module to see more details.
⑤ Installer can check today's production information in this area.
(System Energy, Peak Power and Latest Power)

Ex) Web Event Screen



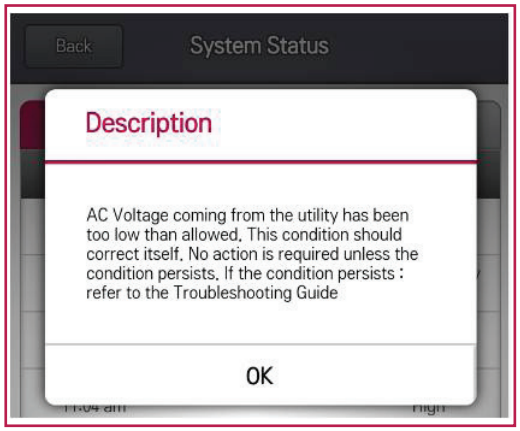
① Current Issues : Provides the current conditions of the system.
② Event History : Provides the event records for aspecified period.
③ Click the device in the query results to check the “Issue Details”. A pop-up window will appear.
Issue Details : Shows the following information:
Affected devices, alert type, alert duration and detailed descriptions.

Notice #1 and #2 AC Voltage High/ Low

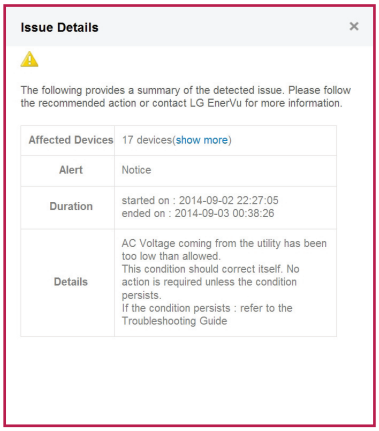
- It occurs when the system voltage is lower or higher than the operational threshold. Due to a problem of the power company, it can temporarily happen or and it is automatically adjusted by the power company. If the problem persists, check the followings.

Nominal Voltage 240 Volt AC		Nominal Voltage 208 Volt AC	
L1, L2 to neutral	106 to 132 Vac	L1, L2, L3 to neutral	106 to 132 Vac
L1 to L2	211 to 264 Vac	L1 to L2 to L3	183 to 229 Vac

Ex) Voltage Low Screen


Back
System Status
Description
AC Voltage coming from the utility has been too low than allowed, This condition should correct itself. No action is required unless the condition persists. If the condition persists : refer to the Troubleshooting Guide
OK

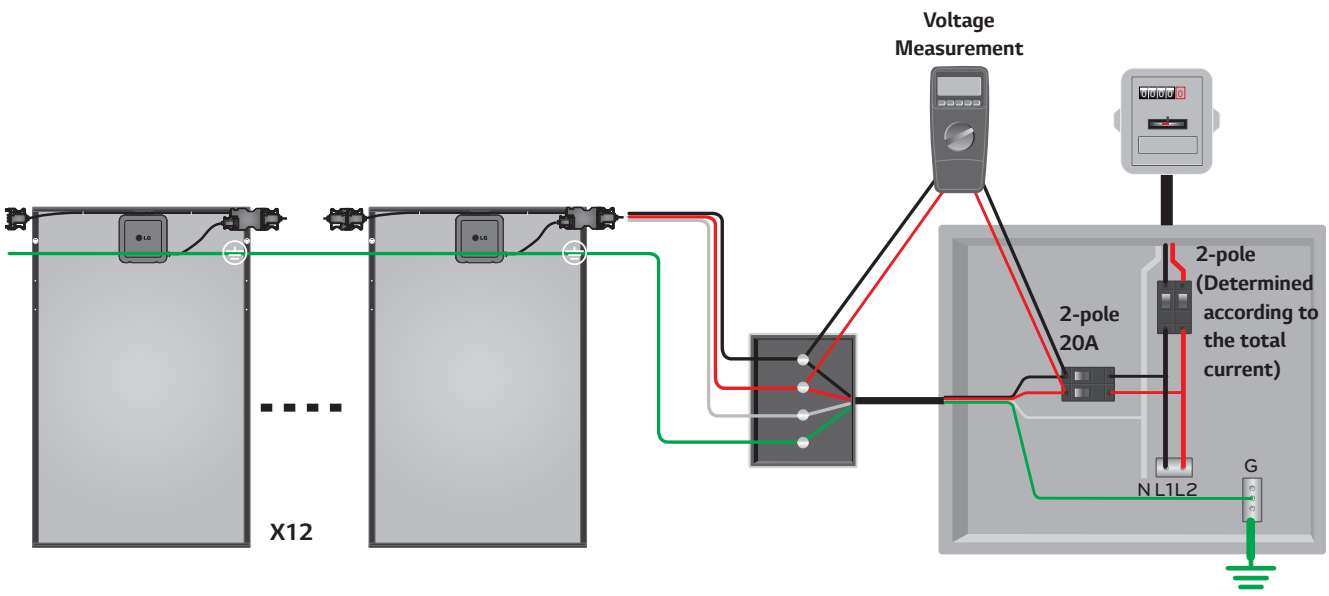
App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
17 devices(show more)
Alert
Notice
Duration
started on : 2014-09-02 22:27:05
ended on : 2014-09-03 00:38:26
Details
AC Voltage coming from the utility has been too low than allowed.
This condition should correct itself. No action is required unless the condition persists.
If the condition persists : refer to the Troubleshooting Guide

Web Event Screen

- Check the voltage at terminals in the distribution panel,sub-panel, AC junctionbox and transformer between the grid and the AC module system. Otherwise, the grid may be unstable or there may be a problem with the maximum capacity of the transformer. There is also a possibility of short circuits arising between two conductors.

The below diagram illustrates an example of checking the voltages.

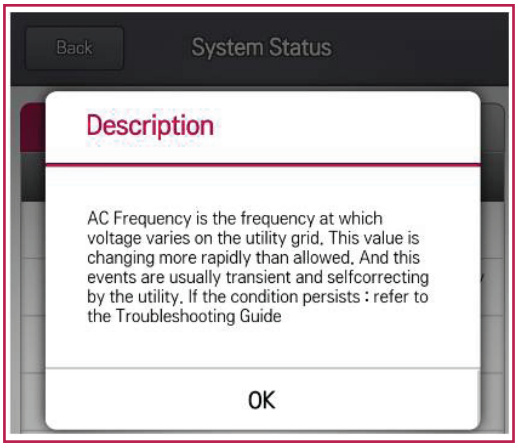


- Check the wirings to see if the connection is ok. The conductors in the cables may have been damaged or cut.
- Check if the connector connection is ok. The connector may be broken or connected improperly.
- Check that there is not discrepancy between the real grid voltage and the voltage setting in the installation app.
- Check that the permissible current of the circuit breaker is 20A.
- Check if the cables are for outdoor usage.
- Check the size of the cables. If the size of the cables is smaller than 12AWG, the flowing current in cables may be limited and the voltage may rise.

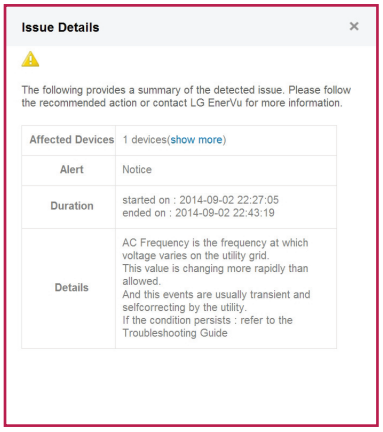
Notice #3 AC Frequency Changing Too Fast

• Occurs if system voltage is lower or higher than the operational threshold. It is usually caused by a problem with the energy company. It may be a temporary problem, and is automatically corrected by the energy company. If the problem persists, check the following:

Ex) Frequency Changing Too Fast Screen


Back
System Status
Description
AC Frequency is the frequency at which voltage varies on the utility grid. This value is changing more rapidly than allowed. And this events are usually transient and selfcorrecting by the utility. If the condition persists : refer to the Troubleshooting Guide
OK

App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
1 devices(show more)
Alert
Notice
Duration
started on : 2014-09-02 22:27:05
ended on : 2014-09-02 22:43:19
Details
AC Frequency is the frequency at which voltage varies on the utility grid.
This value is changing more rapidly than allowed.
And this events are usually transient and selfcorrecting by the utility.
If the condition persists : refer to the Troubleshooting Guide

Web Event Screen

• Check if there other any other alerts from the app.

• Check the system voltage.

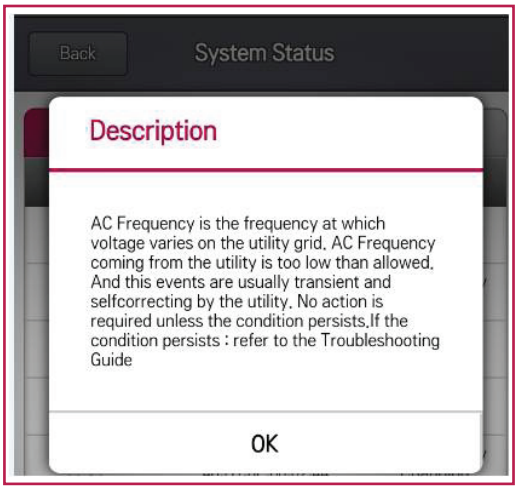
• Inquire to the power company after closing the circuit breaker.

Notice #4, #5 AC Frequency High/ Low

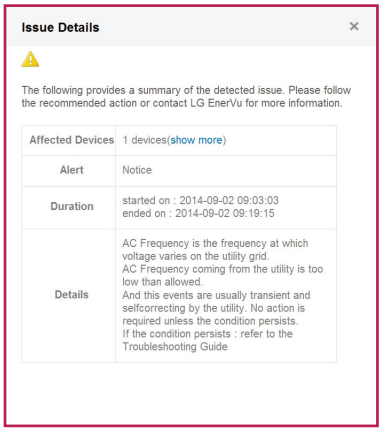
• Occurs if system voltage is lower or higher than the operational threshold. It is usually caused by a problem with the energy company. It may be a temporary problem, and is automatically corrected by the energy company. If the problem persists, check the following:

Nominal Frequency 60Hz	**59.3 to 60.5Hz**
Hawaii	**57 to 60.5Hz**

Ex) AC Frequency Low


Back
System Status
Description
AC Frequency is the frequency at which voltage varies on the utility grid. AC Frequency coming from the utility is too low than allowed. And this events are usually transient and selfcorrecting by the utility. No action is required unless the condition persists.If the condition persists : refer to the Troubleshooting Guide
OK

App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
1 devices(show more)
Alert
Notice
Duration
started on : 2014-09-02 09:03:03
ended on : 2014-09-02 09:19:15
Details
AC Frequency is the frequency at which voltage varies on the utility grid.
AC Frequency coming from the utility is too low than allowed.
And this events are usually transient and selfcorrecting by the utility. No action is required unless the condition persists.
If the condition persists : refer to the Troubleshooting Guide

Web Event Screen

• If you receive a message regarding low AC Voltage, please check the circuit breaker.

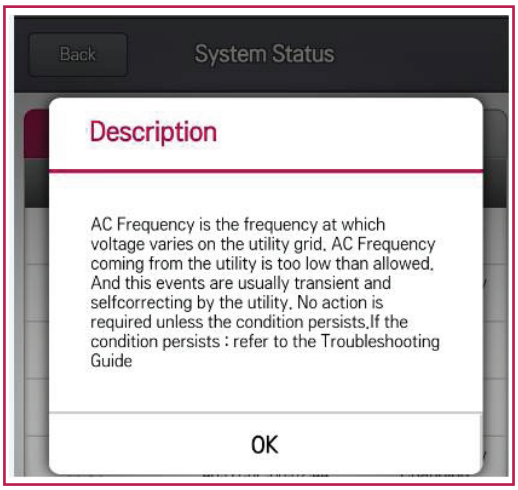
• Problem may occur due to instability of the utility service.

Error #1 DC Voltage High

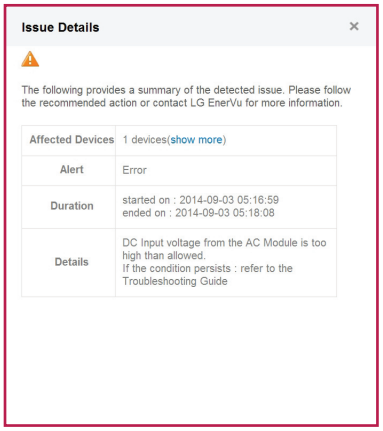
• Occurs if the AC module DC input voltage is higher than 50V.

DC Voltage Operation Range	20 to 45 VDC

Ex) DC Voltage High Screen


Back
System Status
Description
AC Frequency is the frequency at which voltage varies on the utility grid. AC Frequency coming from the utility is too low than allowed. And this events are usually transient and selfcorrecting by the utility. No action is required unless the condition persists.If the condition persists : refer to the Troubleshooting Guide
OK

App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
1 devices(show more)
Alert
Error
Duration
started on : 2014-09-03 05:16:59
ended on : 2014-09-03 05:18:08
Details
DC Input voltage from the AC Module is too high than allowed.
If the condition persists : refer to the Troubleshooting Guide

Web Event Screen

• Check for possible damages in the module and microinverter.

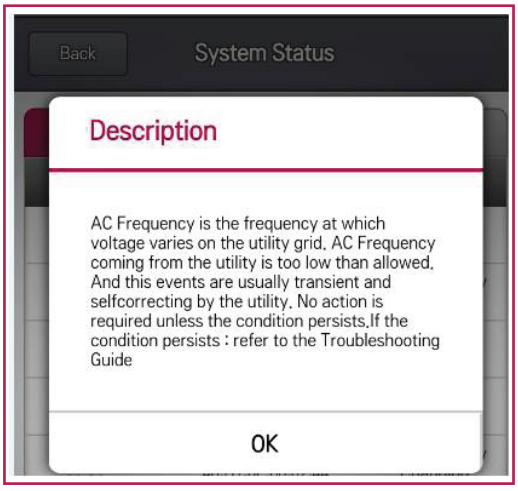
• If problem persists, request for a replacement AC module.

Error #2 DC Current High

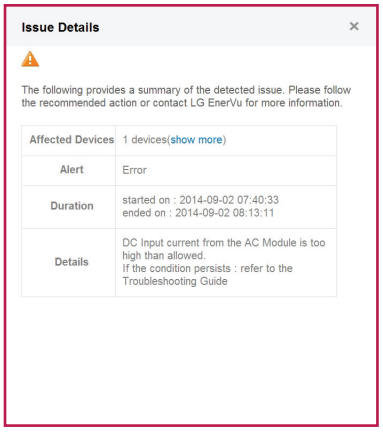
• Occurs if the AC module input current is higher than the limit.

Max. Input Operating DC current	12 ADC

Ex) DC Current High Screen


Back
System Status
Description
AC Frequency is the frequency at which voltage varies on the utility grid. AC Frequency coming from the utility is too low than allowed. And this events are usually transient and selfcorrecting by the utility. No action is required unless the condition persists.If the condition persists : refer to the Troubleshooting Guide
OK

App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
1 devices(show more)
Alert
Error
Duration
started on : 2014-09-02 07:40:33
ended on : 2014-09-02 08:13:11
Details
DC Input current from the AC Module is too high than allowed.
If the condition persists : refer to the Troubleshooting Guide

Web Event Screen

• Using a multimeter, check the voltage of the input terminal.

• Check for other messages.

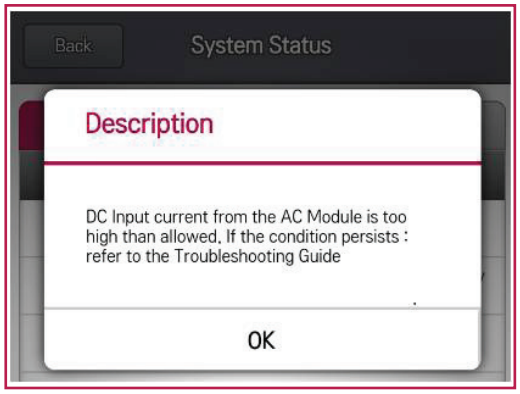
• If problem persists, request for a replacement micro inverter.

Error #3 AC Current High

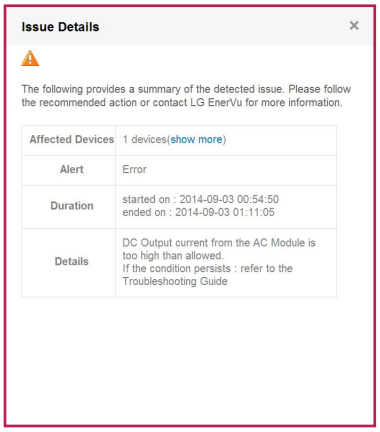
• Occurs if the AC module output current exceeds the operational threshold.

Nominal Voltage 240 Volt AC		Nominal Voltage 208 Volt AC	
Max. Output AC current	1.27A AC	Max. Output AC current	1.44A AC

Ex) AC Current High Screen


Back
System Status
Description
DC Input current from the AC Module is too high than allowed. If the condition persists : refer to the Troubleshooting Guide
OK

App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
1 devices(show more)
Alert
Error
Duration
started on : 2014-09-03 00:54:50
ended on : 2014-09-03 01:11:05
Details
DC Output current from the AC Module is too high than allowed.
If the condition persists : refer to the Troubleshooting Guide

Web Event Screen

• Check for other messages.

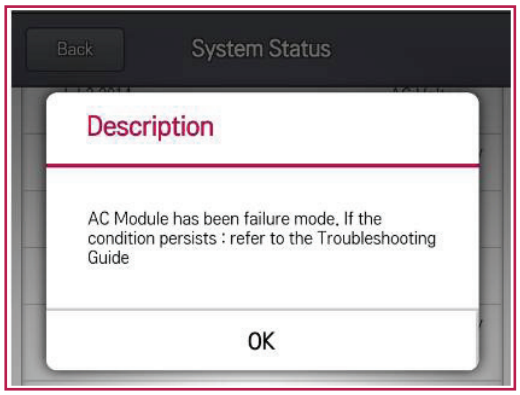
• Problem may stem from instability of the utility service.

• Check that proper cables are used for the system and that the AC connector is connected correctly.

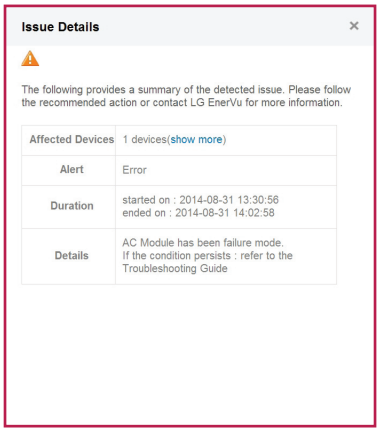
Error #4 Inverter Failure

• Occurs if AC module malfunctions..

Ex) Inverter Failure Screen


Back
System Status
Description
AC Module has been failure mode, If the condition persists : refer to the Troubleshooting Guide
OK

App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
1 devices(show more)
Alert
Error
Duration
started on : 2014-08-31 13:30:56
ended on : 2014-08-31 14:02:58
Details
AC Module has been failure mode.
If the condition persists : refer to the Troubleshooting Guide

Web Event Screen

• Check for other messages.

• Problem may stem from instability of the system.

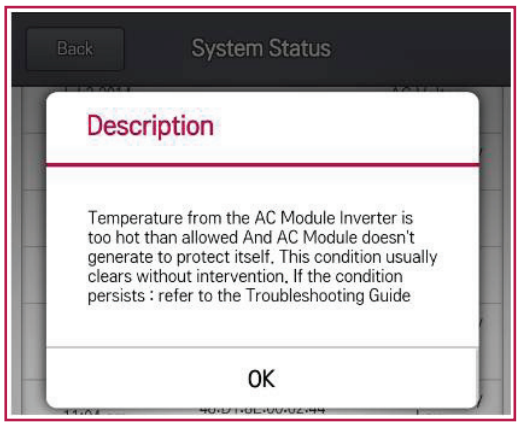
• Check that proper cables are used for the system and that the AC connector is connected correctly.

Error #5 Temperature Protection

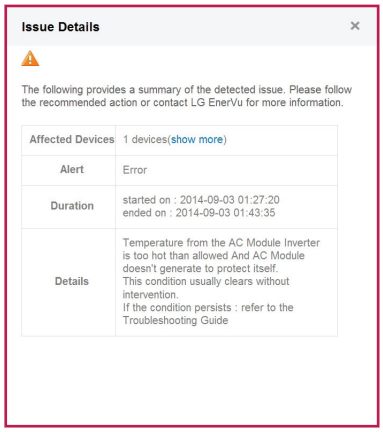
• Occurs if the internal temperature of the inverter is outside of the operation range; operation will automatically be stopped.

Operating Temperature (Internal)	-40 ~ + 90°C (-40 ~ +194°F)

Ex) Temperature Protection Screen


Back
System Status
Description
Temperature from the AC Module Inverter is too hot than allowed And AC Module doesn't generate to protect itself. This condition usually clears without intervention. If the condition persists : refer to the Troubleshooting Guide
OK

App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
1 devices(show more)
Alert
Error
Duration
started on : 2014-09-03 01:27:20
ended on : 2014-09-03 01:43:35
Details
Temperature from the AC Module Inverter is too hot than allowed And AC Module doesn't generate to protect itself.
This condition usually clears without intervention.
If the condition persists : refer to the Troubleshooting Guide

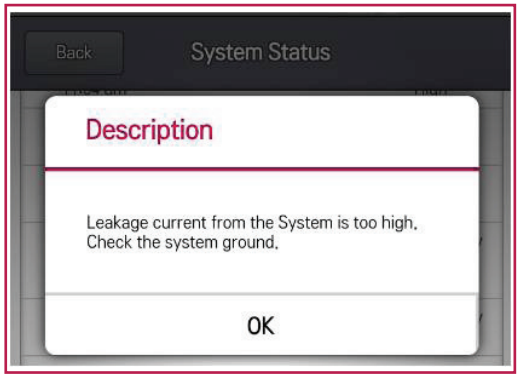
Web Event Screen

• Check that the operational ambient temperature is within the operational range.
  If the ambient temperature is above 65°C (145°F), the internal temperature of the micro inverter may exceed 90°C (194°F).
• Operation will resume automatically when the ambient temperature returns within the operational range.

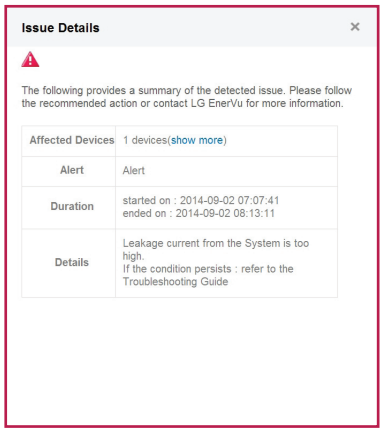
Alert GFDI

• Occurs if the system current leakage exceeds the limit.

Ex) GFDI Screen



App Message Screen


Issue Details
The following provides a summary of the detected issue. Please follow the recommended action or contact LG EnerVu for more information.
Affected Devices
1 devices(show more)
Alert
Alert
Duration
started on : 2014-09-02 07:07:41
ended on : 2014-09-02 08:13:11
Details
Leakage current from the System is too high.
If the condition persists : refer to the Troubleshooting Guide

Web Event Screen

• Check for other error messages.
  In case of a GFDI error, the system will automatically reset within 1 minute.
• If problem persists, check all connections.
  Check that the wirings status is ok. The insulators (or jackets) of the cables may be worn out or cut.

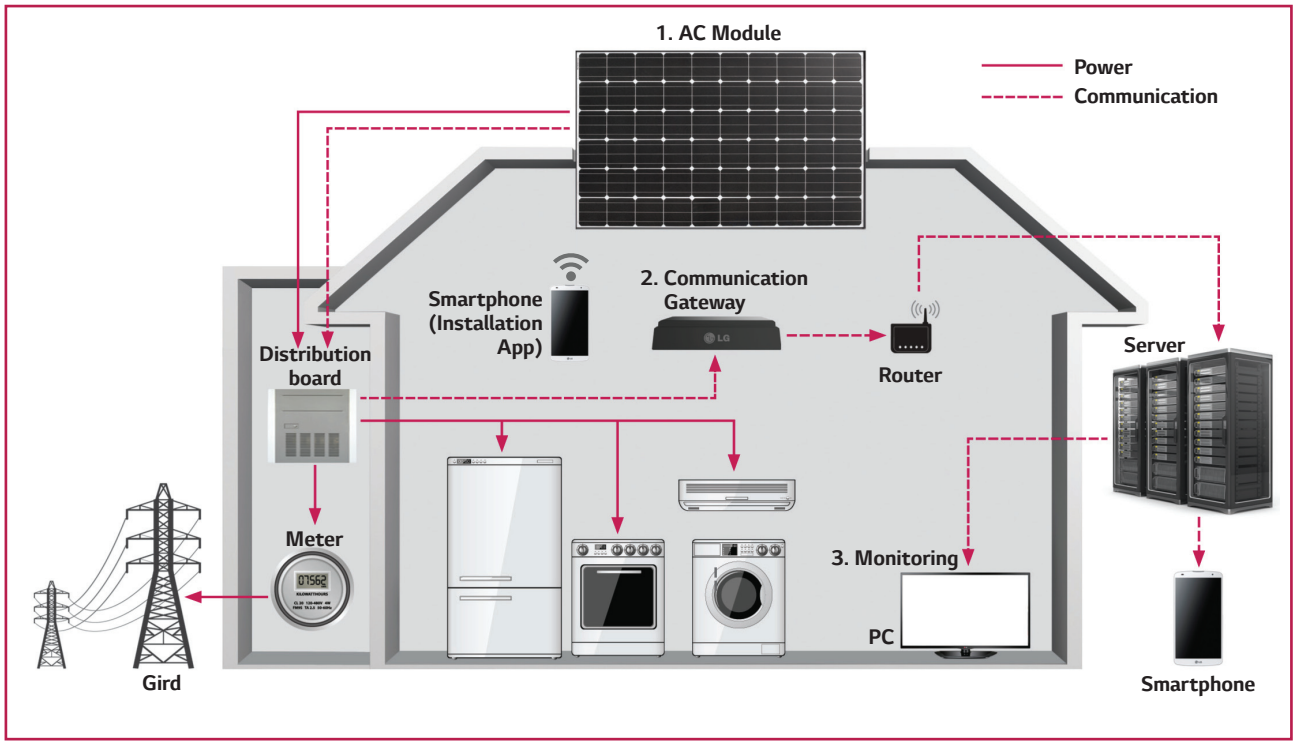
What is GFDI(Ground Fault Detector/Interrupter)?

Ground fault is when currents flowing through the cable leak through an exposed conductor and touches the ground. The GFDI(Ground Fault Detector/Interrupter) function detects events of ground fault and automatically stops operation of the AC module.

3 Gateway and Communication Issues

3-1 Power Line Communication Issues

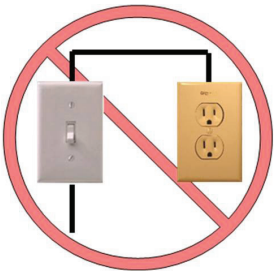
• The micro inverter has a built-in power line communication module to support communication with the gateway. The gateway includes the same module to communicate with the microinverter. LG AC module monitoring system is designed to automatically achieve power line communication without additional configuration.
However, the gateway and microinverter are commonly connected to the same power source in a home or building. As a result, other devices can affect the communication between the gateway and micro inverter, and vice versa. This interference can lead to communication issues.



3-1-1 Factors that Affect Power Line Communication

• Power strips or surge protectors in the same circuit.
• UPS (Uninterruptible Power Supply) or Battery backup units in the same circuit.
• Lamp dimming switches.
• Power line communication-based home networks or home automation devices.
• Sensor lamps
• Battery Chargers (Cell phone and laptop charger)
• AC Adapters
• Heavy rotating motors (fans, refrigerators, freezers, water pumps, etc.)
• Home Appliances including but not limited to washing machines and dryers, vacuums, hair dryers, electric drills, etc.
• Electricity powered insect repellants.
• Other electronic devices.
- Please designate a power outlet for the sole use of the gateway.

3-1-2 Cautions during Gateway Installation



- Power strips, surge protectors and outlet adapters can interfere with power line communication. Be sure to plug the gateway directly to a power outlet.
- A lamp or light switch can contribute unwanted noise to the communication. Be sure to dedicate a power outlet for the sole use of the gateway.
- Existing home appliances and other electronics can interfere with the gateway's power line communication.

3-1-3 Problems Checking AC Module through the Smartphone App

- If AC modules registered to a gateway cannot be accessed through the smart phone app, there is a communication problem between the gateway and AC module.
- This could be a problem with the current outlet. Try to connect the gateway to a different outlet.
- Though the maximum communication distance range is 328 yds. (under optimal conditions), it is recommended to install the gateway within 109 yds. (100m) of the AC modules.
- It is strongly recommended to have a dedicated outlet between the gateway and AC module. Appliances and devices using the same outlet will disrupt communication.

3-1-4 Discrepancy of Installed AC Module Quantity on Smart phone App

- If the number of AC module on the app does not correctly reflect the number of installed modules, it is a possibility that the AC modules are not fully operational due to insufficient power supply for communication. After checking that energy is being generated in the modules, try scanning for the missing modules on the app.
- Scan for the AC modules during the day when they are generating energy.
- If the error continues, there is a problem with the communication connection. Please refer to 3-1-1 Factors that Affect Power Line Communication.

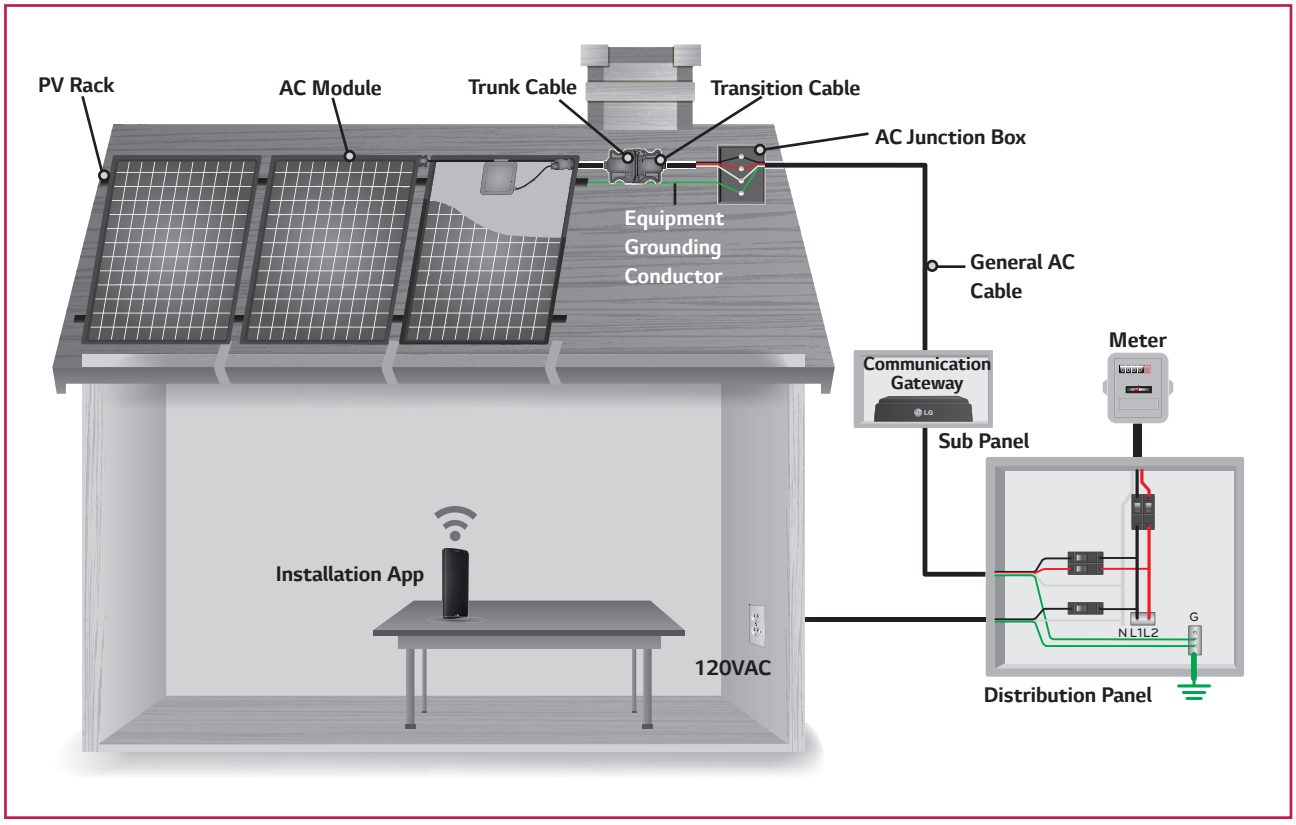
3-1-5 Number of Registered AC Modules Fluctuating on Smart phone App

- The number of registered AC modules can change on the app for two reasons.
- The built-in power line communication module is powered through the micro inverter. Depending on the level of solar power generation, the communication module might not receive sufficient power to communicate normally with the gateway. Refresh the app during a different time.
- Communication errors can arise from the use of certain household devices. Please try again after powering off the devices suspected of causing the problem.If the error persists, please refer to 3-1-1 Factors that Affect Power Line Communication.

3-1-6 Checking for Interferences to the Power Line Communication

- If there is still a problem with the connection between the gateway and the AC module, it is necessary to check the factors causing interference.
- First, connect the gateway directly to the AC module. This will eliminate any potential interference caused by other devices; normal communication should be achieved and the AC modules should be detectable by the smart phone app.
  If the AC modules are still not detected on the app, there could be a communication problem between the smart phone/tablet and the gateway. If you suspect that there is a problem with the gateway, please request for a replacement unit.

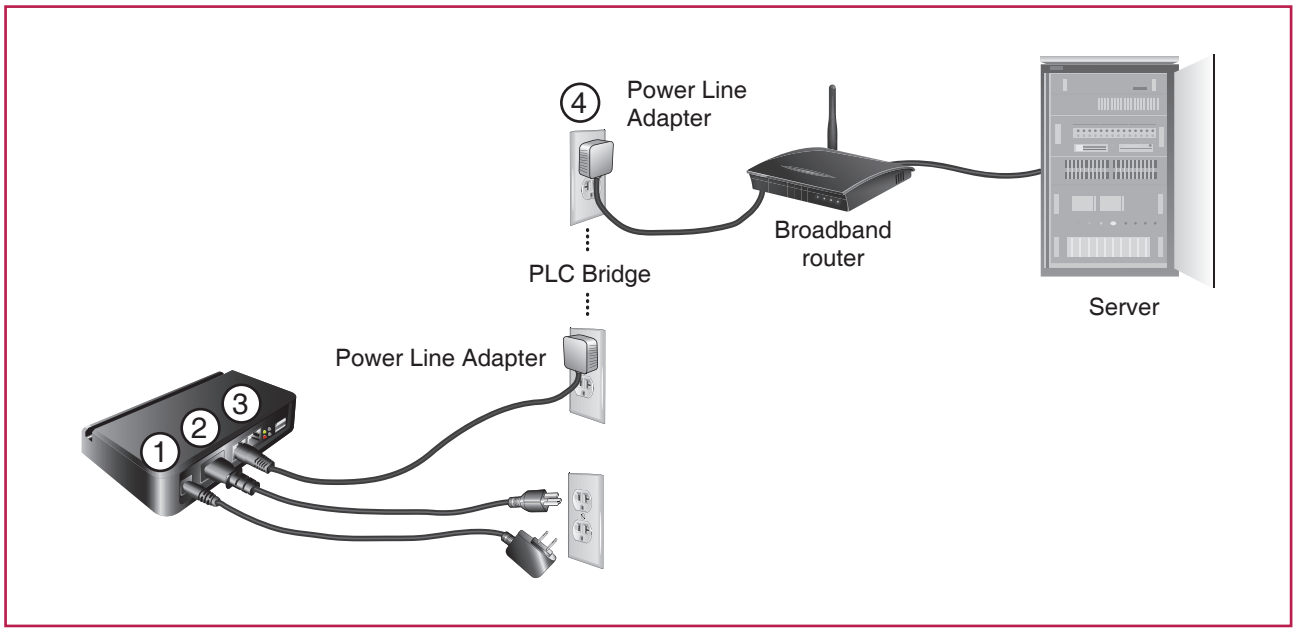
It is recommended to install the gateway as illustrated in the figure below to prevent communication interferences.



- If normal communication between the gateway and the AC module is established, close all the circuit breakers except for that of the gateway and the AC module. Disconnect the gateway from the AC module and re-install it indoors.
- Verify that the connection between the gateway and AC module is maintained after the second installation. The correct number of AC modules should now be visible from the app.
- Turn on one of the circuit breakers and wait 10 to 15 minutes. Scan for the AC modules through the app. If successful, turn on another circuit breaker and scan for the AC modules. Repeat until all circuit breakers are back on. If you encounter an error while scanning, the last circuit breaker is interfering with the communication.

3-1-7 Connecting the Gateway to a Remote Router

If the gateway cannot detect the installed AC modules, it is recommended to move the gateway near the distribution panel for more reliable communication. To do so, the gateway needs to be connected to a remote router via PLC Bridge as illustrated below.



① Connect the AC adapter from **Power Port (12V/1A)** of the gateway to a dedicated 120VAC outlet.

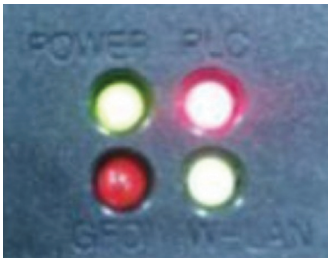
② Connect the PLC cable from **PLC IN Port** of the gateway to a dedicated 120VAC outlet.

③ Connect one of the power line adapters from the **LAN Port** of the gateway to a 120VAC outlet.

④ Connect the other power line adapter from a spare port on the broadband router to a 120VAC outlet.

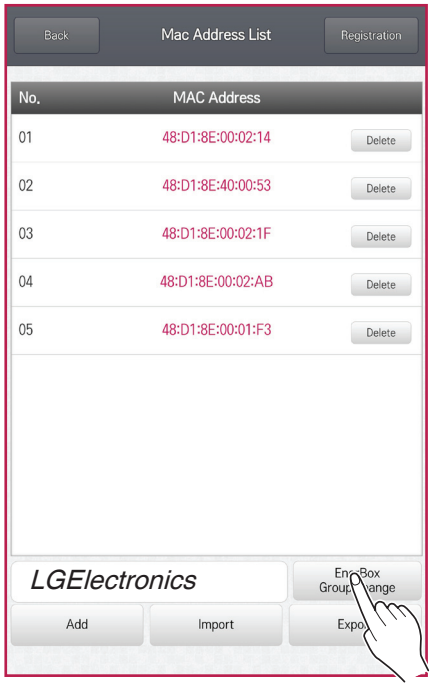
3-1-8 Solving Connection Issues in the Gateway

If connection problems occur on the gateway, please check the LED status located on the back of the gateway and follow the troubleshooting table below. If the problem persists, please turn off the system circuit breaker and contact the service center (1-888-865-3026, lg.solar@lge.com)



LED status	Troubleshooting
Power LED(No Light)	AC Adapter may be incorrectly connected. Check the AC Adapter and outlet in use; if power still does not come on, contact your electricity provider for possible power grid problems.
GFDI ON (Red)	Possible wiring problems within the system. Turn off then on using the system circuit breaker, and wait 10 minutes.
PLC ON (Red)	Connection between AC cable and outlet or system and power grid may be interrupted. Reconnect the AC cable; if light does not change to green, try other outlets.
Wireless LAN ON (Red)	Possible problem with the wireless module inside the gateway. Contact the service center.

3-1-9 Registering Additional AC Modules to the Gateway



If you hit the Registration button before listing all AC modules, or you need to add the unlisted AC module, follow steps below.

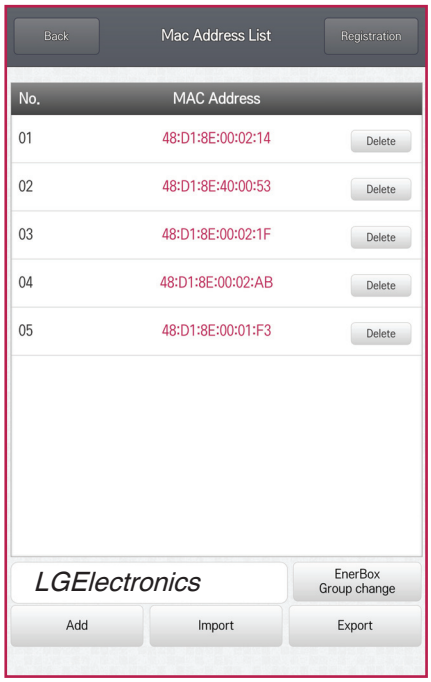
① Enter LGElectronics (initial password) on the blank box in figure and press **EnerBoxGroupchage** button toreturn the gateway to the initial condition. Check PLC LED. It should turn red.
② Press the Back button. Wait for a minute and check that the PLC LED has changed green.Then, press MAC Address List and check if the additional AC modules have been listed.
※ If you can't check the additional AC modules, connect the gateway to another outlet near the distribution panel and search for the unlisted AC modules.
③ Press **Registration** button to finish.

3-1-10 Changing the EnerBox

If the EnerBox is not working correctly, follow steps below to troubleshoot.

① After connecting a new EnerBox, enter the serial number of the failed EnerBox on the blank and press **EnerBox Group change** button.
② Compare MAC addresses listed in App and web server.
③ If matching, press **Registration** button to finish.

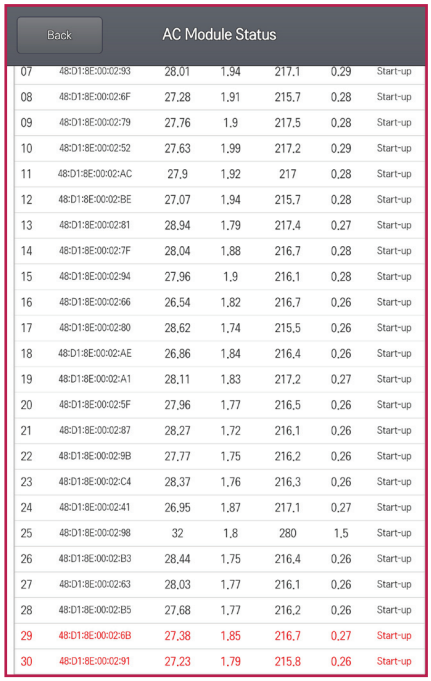
3-1-11 Registering a Replacement AC Module to the Gateway



If you need toexchange an AC module, follow the steps below.

① Enter LGElectronics (initial password) on the blank box in the figure and press the **EnerBox Group chage** button to return the gateway to the initial condition.
Check that the PLC LED has turned red.
② Press **Back** button. Wait for a minute and check that PLC LED is now turned to green. Then. press **MAC Address List** and check if the additional AC modules have been listed.
※ If you can't see the additional AC modules, connect the gateway to another outlet near the distribution panel and search for the unlisted AC modules.
③ Press **Delete** button to delete the exchanging AC module MAC address.
④ Press **Registration** button to finish.

3-1-12 Relocating a Gateway with Completed AC Module Registration



After the EnerBox is connected to a 120VAC outlet of the new location, enter into **AC Module Status** and check that all previously registered MAC addresses colors are shown in black.

※ MAC address color is red : Unreliable link detection.
If some MAC addresses colors are red, the EnerBox must be connected to a different AC outlet.

4 Gateway and Communication Issues

4-1 Network Configuration Troubleshooting

Web Server Communication Errors

- Check the LAN cable connection to the wired LAN port. If necessary, reconnect.
- Check the hub or router settings.
- Check the smart phone app settings.
- Check that the server IP and domain are listed correctly on the app.
- Reset the power of the Gateway.
- Check that the network is stable with your service provider.

Memo

Memo

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